

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2005-20726; Directorate Identifier 2004-NM-265-AD; Amendment 39-14337; AD 2005-20-40]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 757-200, -200CB, and -200PF Series Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain Boeing Model 757-200, -200CB, and -200PF series airplanes. This AD requires an inspection of each trailing edge flap transmission assembly to determine the part number and serial number, and related investigative and corrective actions and part marking if necessary. This AD results from a report indicating that cracked flap transmission output gears have been discovered during routine overhaul of the trailing edge flap transmission assemblies. We are issuing this AD to prevent an undetected flap skew, which could result in a flap loss, damage to adjacent airplane systems, and consequent reduced controllability of the airplane.

DATES: Effective November 17, 2005.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of November 17, 2005.

ADDRESSES: You may examine the AD docket on the Internet at <http://dms.dot.gov> or in person at the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street SW., Nassif Building, room PL-401, Washington, DC.

Contact Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207, for service information identified in this AD.

FOR FURTHER INFORMATION CONTACT: Douglas Tsuji, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 917-6487; fax (425) 917-6590.

SUPPLEMENTARY INFORMATION:

Examining the Docket

You may examine the AD docket on the Internet at <http://dms.dot.gov> or in person at the Docket Management Facility office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Management Facility office (telephone (800) 647-5227) is located on the plaza level of the Nassif Building at the street address stated in the ADDRESSES section.

Discussion

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to certain Boeing Model 757-200, -200CB, and -200PF series airplanes. That NPRM was published in the Federal Register on March 30, 2005 (70 FR 16175). That NPRM proposed to require an inspection of each trailing edge flap transmission assembly to determine the part number and serial number, and related investigative and corrective actions and part marking if necessary.

Comments

We provided the public the opportunity to participate in the development of this AD. We have considered the comments that have been received on the NPRM.

Support for NPRM

One commenter, the manufacturer, concurs with the content of the NPRM.

Request To Allow Maintenance Records Check

Two commenters request that we revise the NPRM to allow a maintenance records check to determine if any affected transmission assembly is installed upon an airplane. One commenter states that it tracks all its flap transmission assemblies by part number (P/N) and serial number (S/N) in order to record all time and cycle information for each of these units. The commenter asserts that since Boeing Special Attention Service Bulletin (SASB) 757-27-0150, dated December 9, 2004, specifies all suspect flap transmission assemblies by P/N and S/N, it should be allowed to use these data to demonstrate compliance with the NPRM. Another commenter states that it recently updated the P/N and S/N installation records for all transmission assembly positions affected by the NPRM and that these records show that none of the affected assemblies are installed on its airplanes. The second commenter states that the wording of the NPRM prevents it from using these data to demonstrate compliance with the NPRM and requires it to physically view all P/Ns on its airplanes. Since Boeing SASB 757-27-0150 specifies 75 hours per airplane to gain access, inspect, and close access for the eight transmission assemblies, the second commenter asserts that this proposed requirement is excessively onerous.

We agree with this request. If an operator can clearly demonstrate that the maintenance records for an airplane establish that no suspect transmission assembly is installed on that airplane, the records check is acceptable for compliance with the P/N and S/N inspection requirement of the NPRM. Therefore, we have revised paragraph (f) in this AD to permit a maintenance records check instead of the required inspection.

Request To Allow Replacement of Transmission Assembly

One commenter requests that we revise the NPRM to allow replacing a transmission assembly having a defective output gear with a compliant transmission. The commenter states that it does not have the means to repair and test the transmission itself and anticipates sending any suspect transmission to a repair facility for inspection, test, and marking.

We agree with this request. Since the intent of the AD is to remove defective transmission assembly output gears from service, this can be accomplished either by replacing the defective output gear with a compliant output gear or replacing the entire transmission assembly with a compliant transmission assembly. Therefore, we have revised paragraph (f) of this AD to permit "replacing the entire transmission assembly with a new or serviceable flap transmission assembly."

Request To Increase Total Number of Affected Transmission Assemblies

One commenter requests that we change the number of affected transmission assemblies shown in the NPRM. The commenter states that there are four different transmission configurations, each having S/Ns 1 through 325 inclusive, which yields a total of 1,300 affected transmission assemblies rather than 325.

We agree with this request for the reason stated by the commenter. Therefore, we have revised the number of suspect transmission assemblies from 325 to 1,300 in this AD.

Request To Revise Applicability

One commenter requests that we revise the applicability of the NPRM to include only those airplanes with transmission assemblies installed that have the affected P/Ns and S/Ns. The commenter suggests that the applicability could be revised to read, instead of the current wording, "This AD applies to Boeing Model 757-200, -200CB, and -200PF series airplanes, with part number 251N4050-37, -38, -39, or -40 having S/Ns 1 through 325 inclusive, or part number 251N4022-28, -29, -30 and -31 having S/Ns 1 through 325 inclusive."

We do not agree with this request. We have no means of ensuring that every trailing edge flap transmission assembly with part numbers 251N4050-37, -38, -39, and -40; and 251N4022-28, -29, -30 and -31; each having S/Ns 1 through 325 inclusive; can be located for inspection without canvassing all Model 757-200, -200CB, and -200PF series airplanes. We have not changed this AD in this regard. However, as previously discussed, we have revised this AD to permit a maintenance records check to locate suspect transmission assemblies instead of the required inspection, which should greatly reduce the burden to operators.

Requests To Revise Estimated Work Hours

Two commenters request that we revise the Costs of Compliance section of the NPRM to increase the estimated number of work hours needed to accomplish the required actions. One commenter states that the 1 work hour specified to accomplish the inspection of eight trailing edge flap transmission assemblies is considerably less than the 75 work hours to accomplish the task specified by Boeing SASB 757-27-0150. The commenter states that the NPRM does not accurately reflect the costs for the amount of work required. A second commenter states that the NPRM does not assess the impact of the corrective action. The second commenter states that unscheduled maintenance in heavy maintenance facilities would be required to perform any needed repairs for some airplanes. The second commenter states that, in cases where repair is needed, the time required to gain and close up access and for return-to-service actions is considerably greater than the time specified by the NPRM and would result in unscheduled time out-of-service. Both commenters assert

the cost to accomplish the requirements shown in the NPRM should more closely reflect the labor costs specified by Boeing SASB 757-27-0150 and assert that the discrepancy in the cost estimates places undue hardship on operators.

In reply to the first commenter: We acknowledge that the amount of work estimated by the Boeing service bulletin to open and close the access ways is considerable. However, the cost information specified describes only the direct costs of the specific actions required by this AD. Based on the best data available, the manufacturer provided the number of work hours necessary to do the required inspection; one (1) work hour in this case. This number represents the time necessary to perform only the actions actually required by this AD. We recognize that, in doing the actions required by an AD, operators may incur additional costs in addition to the direct costs. The cost analysis in AD rulemaking actions, however, typically does not include additional costs such as the time required to gain access and close up, time necessary for planning, or time necessitated by other administrative actions. Those additional costs may be significant, but may also vary greatly among operators, which makes them almost impossible to calculate.

In reply to the second commenter: The economic analysis of an AD is limited to the cost of actions that are actually required and does not consider the costs of conditional actions, such as repairing a crack detected during a required inspection ("repair, if necessary"). Such conditional repairs would be required—regardless of AD direction—to correct an unsafe condition identified in an airplane and to ensure that the airplane is operated in an airworthy condition, as required by the Federal Aviation Regulations. In this case, we included the manufacturer's estimate of 20 work hours to remove a transmission assembly; remove, inspect, and reassemble the transmission output gear; and reinstall the transmission assembly, but we have no way of knowing how many transmission assemblies will require these actions or what additional actions will be needed to retrofit one transmission assembly. Therefore, we can't provide any further assessment of the total cost impact of the corrective action.

We have not changed this AD with regard to these comments. However, as previously discussed, we have revised paragraph (f) of this AD to specify that a maintenance records check is acceptable instead of the required inspection. A maintenance records check could greatly reduce the burden to operators.

Request To Re-Evaluate Flap Skew Event

One commenter requests that we re-evaluate the probability of a flap skew event and the classification of this condition as an "unsafe condition." The commenter states that it has surveyed its own data, which indicate that it has 252 affected transmission assemblies, and that all of these units had new torque limiters installed because of the requirements of AD 2000-04-18, amendment 39-11601 (65 FR 10693). The commenter states that during this retrofit process, 221 of the 252 transmission assemblies were overhauled and had their output gears checked for defects per the component maintenance manual (CMM). The commenter asserts that, since all operators of the affected airplanes are required to accomplish AD 2000-04-18, the commenter's experience might be taken as typical of the industry's experience, which could mean the quantity of defective output gears has been substantially reduced. The commenter asserts this could lead us to decide that no unsafe condition exists and, therefore, withdraw the NPRM.

We do not agree with this request for the following reasons:

- The commenter assumes that most affected airplanes are no longer subject to the unsafe condition due to industry compliance with AD 2000-04-18, which specifies Boeing Service Bulletin 757-27A0127 as a source of service information. However, AD 2000-04-18 is applicable only to airplanes having line numbers from 1 through 796 inclusive, whereas this AD is applicable to airplanes having line numbers from 1 through 979 inclusive. This leaves 183 airplanes not covered by AD 2000-04-18.

- AD 2000-04-18 requires replacing the transmission assemblies with new assemblies incorporating new, improved torque limiters or replacing the torque limiters in the transmission assemblies with new, improved torque limiters, as provided in CMM Chapter 27-51-13. The commenter asserts that it is likely that all operators who accomplished this retrofit checked the transmission output gears for defects at the same time. We cannot assume that all operators checked the output gears during this retrofit, since checking the output gears was not specified by the CMM as a required part of the retrofit process.
- AD 2000-04-18 requires that retrofitted transmission assemblies having P/N 251N4050-37, -38, -39, or -40 be reidentified as P/N 251N4022-28, -29, -30 or -31, respectively. As already discussed, the commenter asserts that such retrofitted and re-identified transmission assemblies no longer are subject to the unsafe condition. However, Boeing Service Bulletin 757-27-0150 identifies the modified assemblies having those new P/Ns 251N4022-28, -29, -30 and -31, and having S/Ns 1 through 325 inclusive, as possibly having suspect output gears.
- The commenter suggests that its experience might be taken as typical for the industry and again assumes that most affected transmissions are no longer affected by the unsafe condition. As discussed earlier, we determined that, instead of 325 suspect transmission assemblies, there are actually 1,300 suspect transmission assemblies. This larger number indicates the unsafe condition represented by the faulty transmission assemblies could be more extensive than represented in the NPRM.

Our reasoning has led us to determine that the possibility of a flap skew event remains a significant unsafe condition for an unacceptable number of airplanes. We have not changed this AD in this regard.

Clarification of Alternative Method of Compliance (AMOC) Paragraph

We have revised this action to clarify the appropriate procedure for notifying the principal inspector before using any approved AMOC on any airplane to which the AMOC applies.

Conclusion

We have carefully reviewed the available data, including the comments that have been received, and determined that air safety and the public interest require adopting the AD with the changes described previously. We have determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

Costs of Compliance

There are about 979 airplanes of the affected design in the worldwide fleet. This AD will affect about 644 airplanes of U.S. registry.

It will take approximately 1 work hour per airplane to accomplish the required inspection at an average labor rate of \$65 per work hour. Based on this figure, the cost impact of the AD on U.S. operators is estimated to be \$41,860, or \$65 per airplane.

Removal of a transmission assembly; removal, inspection, and reassembly of the transmission output gear; and reinstallation of the transmission assembly; if required; will take about 20 work hours per transmission assembly, at an average labor rate of \$65 per work hour. Required parts will cost about \$325 per transmission output gear. Based on these figures, we estimate the cost of replacement is \$1,625 per transmission output assembly (there are 8 transmission output assemblies per airplane and 1,300 suspect assemblies).

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in subtitle VII, part A, subpart III, section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866;
- (2) Is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket. See the ADDRESSES section for a location to examine the regulatory evaluation.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The Federal Aviation Administration (FAA) amends § 39.13 by adding the following new airworthiness directive (AD):

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at www.faa.gov/aircraft/safety/alerts/

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2005-20-40 Boeing: Amendment 39-14337. Docket No. FAA-2005-20726; Directorate Identifier 2004-NM-265-AD.

Effective Date

- (a) This AD becomes effective November 17, 2005.

Affected ADs

- (b) None.

Applicability

- (c) This AD applies to Boeing Model 757-200, -200CB, and -200PF series airplanes, certificated in any category, as identified in Boeing Special Attention Service Bulletin 757-27-0150, dated December 9, 2004.

Unsafe Condition

- (d) This AD was prompted by a report indicating that cracked flap transmission output gears have been discovered during routine overhaul of the trailing edge flap transmission assemblies. We are issuing this AD to prevent an undetected flap skew, which could result in a flap loss, damage to adjacent airplane systems, and consequent reduced controllability of the airplane.

Compliance

- (e) You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

Inspection To Determine Part Number and Serial Number

- (f) Within 60 months after the effective date of this AD: Do an inspection of each trailing edge flap transmission assembly to determine the part number (P/N) and serial number (S/N) and any applicable related investigative and corrective actions and part marking, by accomplishing all of the applicable actions specified in the Accomplishment Instructions of Boeing Special Attention Service Bulletin 757-27-0150, dated December 9, 2004. If, during any related investigative action, any transmission output gear is found with a defect or crack, before further flight, replace that transmission output gear or replace the entire flap transmission assembly with a new or serviceable

flap transmission assembly. Operators should note that, instead of the P/N and S/N inspection required by this AD, a review of airplane maintenance records for any trailing edge flap transmission assembly is considered acceptable if the P/N and S/N of that assembly can be conclusively determined from that review.

Parts Installation

(g) As of the effective date of this AD, no person may install a trailing edge flap transmission assembly, P/N 251N4050-37, -38, -39, or -40 or P/N 251N4022-28, -29, -30, or -31; having any S/N 001 through 325 inclusive; on any airplane; unless the transmission assembly has been inspected, and any applicable related investigative and corrective actions and part marking has been accomplished, in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 757-27-0150, dated December 9, 2004.

Alternative Methods of Compliance (AMOCs)

(h)(1) The Manager, Seattle Aircraft Certification Office, FAA, has the authority to approve AMOCs for this AD, if requested in accordance with the procedures found in 14 CFR 39.19.

(2) Before using any AMOC approved in accordance with 14 CFR 39.19 on any airplane to which the AMOC applies, notify the appropriate principal inspector in the FAA Flight Standards Certificate Holding District Office.

Material Incorporated by Reference

(i) You must use Boeing Special Attention Service Bulletin 757-27-0150, dated December 9, 2004, to perform the actions that are required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference of this document in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Contact Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207, for a copy of this service information. You may review copies at the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street SW., room PL-401, Nassif Building, Washington, DC; on the Internet at <http://dms.dot.gov>; or at the National Archives and Records Administration (NARA). For information on the availability of this material at the NARA, call (202) 741-6030, or go to <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on September 30, 2005.

Ali Bahrami,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

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